

Serial No. 09/929,049

**REMARKS**

The claims have been amended to improve form and without change of substance and without introduction of new matter. Approval and entry of the amended claims are respectfully requested.

**STATUS OF CLAIMS**

Claims 1, 3, 7, 10 and 11 are pending herein.

All of the pending claims 1, 3, 7, and 10-11 are rejected.

**ITEM 4: REJECTION OF CLAIMS 1, 3, 7, AND 10-11 FOR OBVIOUSNESS UNDER 35 U.S.C. §103(a) OVER KOJIMA IN VIEW OF TODOROKI ET AL. (U.S. PATENT 6,597,333)**

The rejection is respectfully traversed.

As described in the prior response, Kojima (U.S. Patent No. 6,072,448) does not disclose or suggest the feature of the present invention that the criteria for the first and second states are respectively set.

Todoroki et al. (U.S. Patent No. 6,597,333) disclose a brightness control unit for judging whether or not a stationary image is displayed and a total number of times of light emission is reduced when the stationary image is displayed. The Examiner stated that Todoroki et al. disclose the features of the present invention that the judgment has a hysteresis characteristic, therefore, it would have been obvious to one of ordinary skill in the art, at the time that the invention was made to have used the circuit for reducing and increasing the number of sustaining pulses, as taught by Todoroki, to the control part of Kojima so as to prevent a cracking of the plasma display panel, regardless of what pattern of a stationary image is displayed on the plasma display panel.

It is submitted that Todoroki does not disclose or suggest the above feature of the present invention at all. In the following, significant differences of the present invention from Todoroki are detailed.

Todoroki judges whether or not the displayed image is a stationary picture by detecting that a state, in which a difference of APL between a current time and a last time (i.e., a field and a previous field, respectively) is smaller than a reference value Vref, has continued for more than

Serial No. 09/929,049

n times. Further, Todoroki judges whether or not the displayed image is a motion picture by detecting that a state, in which a difference of APL between this time and the last time, is larger than the reference value  $V_{ref}$ , has continued more than a predetermined frequency.

On the other hand, the present invention does not judge whether the displayed image is a stationary picture or a motion picture. As described on page 8, lines 7-16, the present invention judges that a pattern of a small area with high brightness is displayed frequently by detecting that a first state, in which the total number of times of light emission is over a fixed first threshold value, occurs more than a fixed first frequency.

As described above, Todoroki judges whether the displayed image is a stationary picture or a motion picture whereas the present invention does not judge such a matter. In other words, Todoroki does not disclose or suggest to judge, or determine, that a pattern of a small area with high brightness is displayed frequently, as the present invention judges. Kojima does not disclose or suggest this judgment, or determination.

Further, Todoroki detects the difference of APL but the present invention does not detect such a matter. In other words, Todoroki does not disclose or suggest to detect that a first state, in which the total number of times of light emission is over a fixed first threshold value, occurs more than a fixed frequency and that a second state, in which the total number of times of light emission is under a fixed second threshold value, occurs more than a fixed second frequency, as the present invention detects. Kojima does not disclose or suggest this detection.

Further, Todoroki uses the same reference value  $V_{ref}$ , whether the displayed image is judged to be a stationary picture or a motion picture. In other words, Todoroki does not disclose or suggest to change the threshold value for judgment as does the present invention. Kojima does not disclose or suggest this change.

It is acknowledged that Todoroki discloses to change the frequency for the state continuation judgment from n times to the predetermined frequency. However, this change is different from the above change of the threshold value.

The Examiner states that Figs. 3 and 5 of Todoroki show the above change of the threshold value. However, the operations shown in Figs. 3 and 4 are operations to decrease or increase the number of sustaining pulses (the total number of times of light emission) between an initial value  $N1$  and the brightness reducing value  $N_{ref}$ , based on a judgment result obtained in the judgment operation shown in Fig. 2. In other words, the operations shown in Figs. 3 and 5 of Todoroki correspond to the operation carried out by the "control part" of claim 1 of the present

Serial No. 09/929,049

application. Therefore, the initial value of N1 and the brightness reducing value Nref are different from the fixed first threshold and the fixed second threshold of the present invention, and which are used in the sustain frequency judgment part. In other words, Todoroki does not disclose or suggest the judgment having an hysteresis characteristic.

Further, as clearly recited in claim 1, the sustain frequency judgment part judges whether a first state, in which the total number of times of light emission is over a fixed first threshold value, occurs more than a fixed first frequency, and whether a second state, in which the total number of times of light emission is under a fixed second value, occurs more than a fixed second frequency. In other words, the fixed first frequency value is directly related to the fixed first frequency and the fixed second threshold value is directly related to the fixed second frequency because they are used in the same operation.

However, according to Todoroki, the initial value N1 and the brightness reducing value Nref are used in the operations which are different from the judgment operation of the present invention, using the n times and the predetermined frequency. Therefore, the initial value N1 and the brightness reducing value Nref are not directly related to the judgment operation using the n times and the predetermined frequency. In other words, the Examiner incorrectly combines values which are used in respective, different operations.

## CONCLUSION

A feature of the invention is that a control of a total number of times of light emission is carried out, based on a judgment having an hysteresis characteristic. In other words, according to the present invention, the control regarding the total number of times of light emission is carried out so that a total number of times of light emission is decreased when a first state, in which the total number of times of light emission is over a fixed first threshold value, occurs more than a fixed first frequency, and is increased when second state, in which the total number of times of light emission is under a fixed second threshold value, occurs more than a fixed second frequency.

According to this feature, a frequent change of brightness, namely, a flicker, can be avoided. In other words, the brightness control of the apparatus can be made stable.

The references of record, taken singly or in an proper combination, do not disclose this above basic feature or the benefits thereof. Accordingly, it is submitted that the pending claims patentably distinguish over the references of record and, there being no other objections or

Serial No. 09/929,049

rejections, that the application is in condition for allowance, which action is earnestly solicited.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 09/929,049

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Nov 24, 2004

By: [Signature]  
H. J. Staas  
Registration No. 22,010

1201 New York Avenue, NW, Suite 700  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501

**CERTIFICATE OF FACSIMILE TRANSMISSION**  
I hereby certify that this correspondence is being trans-  
mitted via facsimile to: Commissioner for Patents,  
P.O. Box 1450, Alexandria, VA 22313-1450  
on 11-24, 2004  
STAAS & HALSEY  
By: [Signature]  
Date 11-24-04